CLAIMS

What is claimed is:

1. A display apparatus comprising:

a display main body provided with a screen;

a base member supporting the display main body; and

a cylinder assembly provided between the display main body and the base member to liftably support the display main body,

the cylinder assembly exerting a supporting force which is at least as great as a weight of the display main body.

2. The display apparatus according to claim 1, wherein the cylinder assembly comprises:

a pressurized cylinder combined with the base member;

a piston slidably provided in the cylinder; and

a cylinder rod with a bottom combined with an upper surface of the piston and a top combined with the display main body.

3. The display apparatus according to claim 2, further comprising:

a rod supporter, with a top combined with an upper end part of the cylinder rod and a bottom contacting a circumference of the cylinder, to be lifted as a single body with the cylinder rod.

4. The display apparatus according to claim 2, further comprising:

a cylinder supporter combined with the base member to accommodate and support the cylinder.

5. The display apparatus according to claim 2, further comprising:

at least one auxiliary cylinder assembly provided between the display main body and the base member.

6. The display apparatus according to claim 5, wherein the auxiliary cylinder assembly comprises:

a hollow guide pipe combined with the base member; and

a guide rod slidably provided in the guide pipe.

7. The display apparatus according to claim 5, further comprising:

a cylinder supporter combined with the base member to accommodate and support the cylinder and the guide pipe.

8. The display apparatus according to claim 1, wherein

at least one additional cylinder assembly is provided.

9. The display apparatus according to claim 1, further comprising

a cylinder bracket provided between the display main body and the cylinder assembly, which is respectively combined with the display main body and the base member.

10. The display apparatus according to claim 1, further comprising

a cylinder bracket provided between the display main body and the cylinder assembly, which is respectively combined with a rear of the display main body and the base member.

11. The display apparatus according to claim 9, wherein the cylinder assembly comprises:

a pressurized cylinder combined with the base member;

a piston slidably provided in the cylinder; and

a cylinder rod with a bottom combined with an upper end part of the piston and a top combined with the cylinder bracket.

12. The display apparatus according to claim 10, wherein the cylinder assembly comprises:

a pressurized cylinder combined with the base member;

a piston provided slidably in the cylinder; and

a cylinder rod with a bottom combined with an upper end part of the piston and a top combined with the cylinder bracket.

13. A display apparatus comprising:

a display main body;

a base member; and

a cylinder assembly combined to the base member and the display main body, that extends and retracts to vary a distance between the display main body and the base member.

14. The display apparatus according to claim 13, further comprising:

a bracket provided between the display main body and the cylinder assembly to tilt the display main body about an axis perpendicular to the cylinder assembly.

15. The display apparatus according to claim 14, wherein the bracket comprises:

a display bracket combined to the display main body; and

a cylinder bracket combined to the display bracket and the cylinder assembly.

16. The display apparatus according to claim 15, wherein:

the display bracket comprises

a pair of first tilting brackets, each having a bolt inserting hole; and

the cylinder bracket comprises

a pair of second tilting brackets, each corresponding to one of the pair of first tilting brackets, and each having a bolt inserting hole,

wherein a pair of tilting bolts are respectively inserted through the bolt inserting holes of the corresponding first and second tilting brackets, and a pair of tilting nuts, respectively corresponding to the pair of tilting bolts, are combined to the pair of tilting nuts to movably combine the display bracket and the cylinder bracket with a binding force of predetermined magnitude.

17. The display apparatus according to claim 16, wherein:

the binding force generates a friction of predetermined magnitude between the display bracket and the cylinder bracket, which must be overcome to tilt the display main body.

18. The display apparatus according to claim 13, wherein the cylinder assembly further comprises:

a pressurized cylinder combined to the base member;

a piston slidably provided in the cylinder; and

a cylinder rod, combined at a first end to the display main body and combined at a second end to the piston, such that the cylinder rod extends and retracts from the cylinder to vary the distance between the display main body and the base member.

19. The display apparatus according to claim 18, wherein:

a force to extend the cylinder rod due to pressure on the piston is at least as great as a weight of the display main body.

20. The display apparatus according to claim 18, wherein:

a predetermined force to extend the cylinder rod due to pressure on the piston balances a component of a weight of the display main body.

21. The display apparatus according to claim 18, wherein:

a predetermined force to extend the cylinder rod due to pressure on the piston balances a component of a weight of the display main body such that when no external force is applied to vary the distance between the display main body and the base member, the display main body remains stationary relative to the base member.

22. The display apparatus according to claim 18, wherein:

a predetermined force to extend the cylinder rod due to pressure on the piston exceeds a component of a weight of the display main body to compensate for static friction between an inner wall of the cylinder and a circumference of the piston, such that when no external force is applied to vary the distance between the display main body and the base member, the display main body remains stationary relative to the base member.

23. The display apparatus according to claim 18, further comprising:

a rod supporter, combined at a first end to the first end of the cylinder rod, and with an interior that slidably contacts an exterior of the cylinder.

24. The display apparatus according to claim 18, further comprising:

a cylinder supporter, with

a first end contacting a first end of the cylinder and having a cylinder combining hole smaller than a diameter of the cylinder, through which the cylinder rod extends and retracts, and

a second end combined with the base member.

25. The display apparatus according to claim 24, wherein the second end of the cylinder further comprises:

a cylinder bracket that combines with the base member.

26. The display apparatus according to claim 18, further comprising:

at least one auxiliary cylinder assembly adjacent to the cylinder assembly, with a first end combined to the display main body, and a second end combined to the base member.

27. The display apparatus according to claim 26, wherein at least one auxiliary cylinder comprises:

a guide pipe combined with the base member; and

a guide rod combined with the display main body, slidably provided in the guide pipe.

28. The display apparatus according to claim 27, further comprising:

a cylinder supporter, with a first end accommodating and supporting respective first ends of the cylinder and the guide pipe, and a second end combined with the base member.

29. The display apparatus according to claim 28, wherein:

the first end of the cylinder supporter has

a cylinder combining hole smaller than a diameter of the cylinder, through which the cylinder rod extends and contracts, and

a pipe combining hole smaller than a diameter of the guide pipe, through which the guide rod extends and contracts.

30. The display apparatus according to claim 24, further comprising:

a rod supporter, combined at a first end to the first end of the cylinder rod, and with an interior that slidably contacts an exterior of the cylinder supporter.

31. The display apparatus according to claim 27, further comprising:

a rod supporter, combined at a first end to the first end of the cylinder rod, and with an interior that slidably contacts an exterior of the cylinder and an exterior of the guide pipe.

32. The display apparatus according to claim 28, further comprising:

a rod supporter, combined at a first end to the first end of the cylinder rod, and with an interior that slidably contacts an exterior of the cylinder supporter.

33. A cylinder assembly for a display apparatus, combined to a base member and a display main body, the cylinder assembly comprising:

a cylinder pressurized with a fluid and combined to the base member;

a piston slidably provided in the cylinder; and

a cylinder rod, combined at a first end to the display main body and combined at a second end to the piston, such that the cylinder rod extends and retracts from the cylinder to vary a distance between the display main body and the base member,

wherein the piston is provided with at least one through hole, allowing the fluid to pass therethrough and maintain a uniform pressure in the cylinder as the piston slides in the cylinder.